

# Occupational Injuries

## BACKGROUND

### National

In 2007, there were over 146,000 persons 16 years of age and older in the work force.<sup>1</sup> Management and professional occupations; sales and office occupations; and service occupations were the leading industries, and employed 77% of all workers in the United States. There were slightly more male workers (54%) employed in the workforce than female workers (47%); however, males accounted for 92% of the 5,657 occupational fatalities.<sup>2</sup>

Each year, almost 6,000 persons die from occupational injuries in the United States.<sup>3</sup> In 2007, occupational fatalities decreased 3% from the previous year (5,657 in 2007 and 5,840 in 2006), and the rate for work-related deaths was 3.8 per 100,000 workers. Persons 45 years of age and older had a higher work-related injury death rate than the overall national rate. Fatal occupational injury rates were the highest for the agriculture, forestry, fishing, and hunting (27.9 per 100,000 workers); transportation and warehousing (16.9 per 100,000); and construction (10.5 per 100,000) industry sectors. However, the construction industry had the highest number of fatal injuries during this time. Highway incidents (1,414 deaths), homicides (847 deaths), and falls (628 deaths) were the most frequent incidents associated with work-related fatalities.<sup>2</sup>

Nearly 1.8 million workers were employed full-time in the agriculture industry in 2007. Agriculture-related activities have consistently had one of the highest work-related fatality rates. This industry is one of the few occupations that also pose a risk of fatal and nonfatal injury to families of farmers, since the agricultural work is

often shared among family members and takes place at the family's residence.<sup>4</sup>

### Oklahoma

In Oklahoma, approximately 100 occupational injury deaths are reported each year to the Injury Prevention Service. Transportation incidents account for the highest number of deaths, followed by agriculture-related deaths.<sup>3</sup> From January 1, 1998 to December 31, 2007, 1,122 workers in Oklahoma lost their lives to work-related deaths – an average of 112 deaths per year. Historically, Oklahoma's annual death rate has been higher than the national average.<sup>2</sup>

Twenty-four percent of deaths occurred among workers between 35 and 44 years of age, and 20% of deaths were among those 45 to 54 years of age. Ninety-three percent of all work-related deaths were among males. Sixty-nine percent of work-related incidents occurred between 8:00 a.m. and 8:00 p.m., with the highest occurrences between noon and 4:00 p.m.<sup>5</sup>

The leading causes of work-related deaths included motor vehicle crashes (37%), machinery (16%), and falls from elevation (12%). Truck driving/delivery was the occupation resulting in the greatest number of fatalities (24%), followed by farming/ranching (17%), and construction (10%).<sup>5</sup>

Workers who were involved in fatal injuries most frequently suffered multiple traumatic injuries (35%). Traumatic head injuries accounted for 21% of fatalities and traumatic chest injuries accounted for 7%.<sup>5</sup>

Occupational health indicator data revealed that Oklahoma rates were higher than national rates for the following work-related conditions: hospitalizations, amputations, and pesticide-

associated illnesses/injuries reported to poison control centers. Work-related rates were lower in Oklahoma than the United States for hospitalized burn injuries, pneumoconiosis and malignant mesothelioma as well as for elevated blood lead levels.

## PROGRESS

### Funding

The Injury Prevention Service (IPS) receives funding for activities associated with occupational injuries and fatalities through two program grants from the National Institute for Occupational Safety and Health: the Oklahoma Fatality Assessment and Control Evaluation (OKFACE) and the Occupational Safety and Health Surveillance programs. The grant funding for OKFACE ended on August 31, 2007. The Occupational Safety and Health Surveillance Program is currently funded through June 30, 2010.

### Publications

For the OKFACE grant, comprehensive data were collected on all occupational fatalities, and on-site investigations were conducted for a subset of the deaths. For the Occupational Safety and Health Surveillance Program, the Injury Prevention Service established a fundamental surveillance system to collect data on occupational hazards, diseases, injuries, and deaths in Oklahoma. These data were collected and analyzed to determine the magnitude and trends of occupational indicators. In addition, detailed information continued to be collected on all occupational deaths from multiple sources including death certificates, Medical Examiner reports, and Occupational Safety and Health Administration reports. Data were used to prepare summary data reports, *Injury Updates*, fact sheets, and occupational death investigation reports (listed below). These materials were distributed and posted on the Injury Prevention Service website (<http://ips.health.gov>) to be

utilized in safety trainings by employers and safety managers. A news release on nail gun-related injuries was also prepared and distributed to statewide media outlets.

### Summary Data Reports

- Occupational Fatalities in Oklahoma, 1998-2001
- Occupational Fatalities in Oklahoma, 1998-2002
- Occupational Fatalities in Oklahoma, 1998-2005
- Occupational Fatalities in Oklahoma, 1998-2006
- Oklahoma Occupational Health Indicators, 2003
- Oklahoma Occupational Health Indicators, 2003-2005

### *Injury Update* Reports

- Construction-Related Fatalities, Oklahoma, 1998-2001
- Hospitalizations Paid by Workers' Compensation, Oklahoma, 2005
- Jump-Start/Bypass-Start-Related Fatalities in Oklahoma, July 1997-February 2005
- Work-Related Burns Among Restaurant and Food Service Workers, Oklahoma, 1988-2006
- Work-Related Burns Among Roofers, Oklahoma, 1988-2006
- Work-Related Deaths Among Young Workers Under 25 Years of Age, Oklahoma, 1998-2004
- Work-Related Deaths in Oklahoma, 1998-1999
- Work-Related Deaths in Oklahoma, 1998-2007
- Work-Related Homicides, Oklahoma, 1998-2004
- Work Zone-Related Deaths, Oklahoma, July 1997-December 2006

### *OKFACE News* Reports

- Construction Safety
- Life and Death in the Oil Field
- Tractor Safety

## Fact Sheets

- Burn Injuries Among Roofers
- Burn Injuries in Teen Restaurant Workers
- Chemical Burns
- Electric Current Safety
- Safety in Eating and Drinking Establishments
- Work-Related Falls

## OKFACE Death Investigation Reports

A total of 53 death investigation reports were completed on the following fatal injuries:

- Machine-related deaths
- Highway work zone fatalities
- Immigrant deaths
- Work-related fatalities among youth younger than 18 years of age

Reports are available on the National Institute for Occupational Safety and Health (<http://www.cdc.gov/niosh/>).

Data and investigation reports were distributed to the National Institute of Occupational Safety and Health, Council of State and Territorial Epidemiologists, partners in other states involved in occupational injury prevention, Oklahoma Department of Labor, Occupational Safety and Health Administration, Oklahoma Workers' Compensation Court, Office of the Chief Medical Examiner, Future Farmers of America groups, farm co-ops, county extension offices, career and technology education centers, Oklahoma Safety Council members, Oklahoma Occupational Safety and Health Surveillance Advisory Committee members, and special target groups specific to each publication.

## Collaboration

A scientific advisory committee was established to provide input on the Oklahoma Occupational Safety and Health Surveillance program and to promote collaborations. Members of the committee include representatives from Vital Statistics, hospital discharge database, Oklahoma Workers' Compensation Court, Oklahoma Central Cancer Registry, Adult Blood

Lead Epidemiology and Surveillance Program, Department of Labor, Occupational Safety and Health Administration, Oklahoma Poison Control Center, and university and career and technology instructors with various occupational specialties.

Partnerships have also been created with rural farm co-ops and specific industry groups who are at high risk for work-related injuries to provide safety information through educational campaigns and *Injury Updates*. In addition, the Injury Prevention Service has collaborated with county health departments, the Worker Policy Safety Council, and a co-op council. Farm safety information was distributed through county health department services (i.e., flu clinics). The Worker Policy Safety Council was created by legislation and meets four times per year to study and formulate reforms to reduce work-related injuries. The co-op council, that includes all co-ops in the state, works to decrease risk factors associated with occupational injuries.

## GOALS/OBJECTIVES

### Goal

- Collect relevant data and provide educational information to reduce work-related injuries and deaths.

### Objective

- Reduce deaths from work-related injuries to 7.0 deaths per 100,000 workers by 2015.  
*Baseline:* 2007 America's Health Rankings data for Oklahoma: occupational fatalities=8.3 deaths per 100,000 workers.

## ACTION PLAN

- Continue to collect occupational indicator data through 2010.
- Continue to collect occupational fatality data through 2010.

- Continue to provide partners with relevant data, reports, and fact sheets to be utilized in safety trainings by employers and safety managers through 2015.
  - Prepare and disseminate occupational safety information to construction and restaurant groups.
  - Prepare and disseminate transportation-related injury reports and fact sheets.
  - Prepare and disseminate fact sheets on work-zone safety.
- Prepare and disseminate fact sheets on young workers.
- Prepare and disseminate fact sheets on workers 45 years of age and older.
- Partner with occupational safety groups to promote farm safety education through their quarterly publications.
- Prepare and disseminate fact sheets in Spanish.
- Prepare and disseminate news releases related to occupational injuries (at least one on work-zone safety) through 2015.

## REFERENCES

<sup>1</sup>Bureau of Labor Statistics, U.S. Department of Labor. Current Population Survey. Retrieved 17 June 2009, from: <http://www.bls.gov/cps/tables.htm#charemp>.

<sup>2</sup>Bureau of Labor Statistics, U.S. Department of Labor. 2007 Census of Fatal Occupational Injuries Charts, 1992-2007 (revised data). Retrieved 16 June 2009, from: <http://www.bls.gov/iif/wshwc/foi/cfch0006>.

<sup>3</sup>Injury Prevention Service, Oklahoma State Department of Health. Oklahoma Occupational Safety and Health Surveillance Program Final Progress Report. 30 September 2008.

<sup>4</sup>National Institute for Occupational Safety and Health. NIOSH Safety and Health Topic: Agricultural Safety. Retrieved 20 May 2009, from: <http://www.cdc.gov/niosh/topics/aginjury/>

<sup>5</sup>Injury Prevention Service, Oklahoma State Department of Health. Injury Update: Work-Related Deaths in Oklahoma, 1998-2007. 31 July 2008.